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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/605,493

10/02/2003

David R. Hall

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26932

7590

08/04/2004

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EXAMINER

TA, THO DAC

ART UNIT

PAPER NUMBER

2833

DATE MAILED: 08/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/605,493

Applicant(s)

HALL ET AL.

Examiner

Tho D. Ta

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/13/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “at least one biasing member to urge the first electrical contact against the second electrical contact” must be shown or the feature(s) canceled from the claim(s) (claims 3, 4). No new matter should be entered.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 11 and 12 are objected to because of the following informalities: claim 11, line 3, change "contracts" to --contacts--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-7, 9, 11, 12, 14-18, 20-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Dickson, Jr. et al. (3,696,332).

In regard to claims 1, 21, Dickson Jr. et al. discloses an electrical contact system for transmitting information across tool joints in a drill string, the electrical contact system comprising: a first electrical contact comprising: a first annular resilient material 11; and a first annular conductor 9 embedded within the first annular resilient material 11, the first annular conductor 9 having a surface exposed from the first annular resilient material 11; a second electrical contact adapted to engage the first electrical contact, the second electrical contact having a second annular resilient material 11 and a second annular conductor 10; the first electrical contact configured to contact the second electrical contact such that the first and second annular conductors 9, 10 come into physical contact.

The recitations "configured to minimize signal reflections occurring at the tool joints" and "the first and second resilient materials being further characterized by

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dielectric characteristics and dimensions adjusted to provide a desired impedance to the first and second electrical contacts” has been given no significant patentable weight because it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987).

In regard to claims 2, 22, Dickson Jr. et al. discloses that the first and second electrical contacts further comprise first and second annular housings 7, 8, respectively, to accommodate the first and second annular resilient materials 11, and the first and second annular conductors 9, 10, respectively.

In regard to claims 3-5, 23, Dickson, Jr. et al discloses that at least one biasing member to urge the first electrical contact against the second electrical contact, wherein the biasing member is a spring. (see column 3, lines 56-61).

Claims 6 and 7 are inherent since Dickson, Jr. et al. disclose that the invention is relating to downhole of a well.

In regard to claim 9, Dickson, Jr. et al. discloses that the first and second resilient materials comprise rubber (see column 3, lines 62-65).

In regard to claims 11, 24, Dickson Jr. et al. discloses that a cable 2 is electrically connected to at least one of the first and second electrical contacts.

The recitation "wherein the impedance of the at least one electrical contact is adjusted to match the impedance of the cable" has been given no significant patentable weight because it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

In regard to claims 12, 25, Dickson Jr. et al. discloses 12 that the cable 2 is a coaxial cable.

In regard to claim 14, Dickson Jr. et al. discloses an electrical contact system for transmitting information across tool joints in a drill string, the electrical contact system comprising: a first electrical contact comprising: a first annular resilient material 11; and a first annular conductor 9 embedded within the first annular resilient material 11, the first annular conductor 9 having a surface exposed from the first annular resilient material 11; a second electrical contact adapted to engage the first electrical contact, the second electrical contact having a second annular resilient material 11 and a second annular conductor 10; the first electrical contact configured to contact the second electrical contact such that the first and second annular conductors 9, 10 come into physical contact.

In regard to claims 15-16, Dickson Jr. et al. discloses at least one biasing member to urge the first electrical contact against the second electrical contact, wherein the biasing member is a spring. (see column 3, lines 56-61).

Claims 17 and 18 are inherent since Dickson, Jr. et al. disclose that the invention is relating to downhole of a well.

In regard to claim 20, Dickson Jr. et al. discloses that a cable 2 is electrically connected to at least one of the first and second electrical contacts.

The recitations "wherein the impedance of the at least one electrical contact is adjusted to match the impedance of the cable" has been given no significant patentable weight because it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

5. Claims 1 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Termohlen (4,690,212).

In regard to claim 1, Termohlen discloses an electrical contact system for transmitting information across tool joints in a drill string, the electrical contact system comprising: a first electrical contact comprising: a first annular resilient material 104;

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and a first annular conductor 84 embedded within the first annular resilient material 104, the first annular conductor 84 having a surface exposed from the first annular resilient material 104; a second electrical contact adapted to engage the first electrical contact, the second electrical contact having a second annular resilient material 104 and a second annular conductor 84; the first electrical contact configured to contact the second electrical contact such that the first and second annular conductors 84 come into physical contact.

The recitations "configured to minimize signal reflections occurring at the tool joints" and "the first and second resilient materials being further characterized by dielectric characteristics and dimensions adjusted to provide a desired impedance to the first and second electrical contacts" has been given no significant patentable weight because it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

In regard to claim 13, Termohlen discloses a third annular conductor 86 embedded in the first annular resilient material 104, the third annular conductor 86 being exposed therefrom.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dickson, Jr. et al..

Dickson, Jr. et al. does not disclose the material characteristic of the resilient material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Dickson, Jr. et al. invention by constructing the resilient material of a modifier material which is strengthen the resilient material since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious engineering choice. In re Leshin, 125 USPQ 416 (CCPA 1960).

8. Claims 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dickson, Jr. et al. in view of Harbonn et al. (3,693,133).

Dickson, Jr. et al. does not disclose that the resilient material 11 is selected such that it flows into voids present in the first and second electrical contacts.

Harbonn et al. discloses that the resilient material 5, 5a is selected such that it flows into voids 10, 10a present in the first and second electrical contacts 4, 4a.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Dickson, Jr. et al. invention by constructing the contacts as taught by Harbonn et al. in order to provide a more effective way of electrical connection.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tho D. Ta whose telephone number is (571) 272-2014. The examiner can normally be reached on M-F (8:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (571) 272-2800 ext 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**THO D. TA
PRIMARY EXAMINER**

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08/02/04